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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,548	06/09/2006	Minoru Sugiyama	3163-061714	4734

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EXAMINER	
MARKS, JACOB B	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
10/28/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,548	SUGIYAMA ET AL.	
	Examiner	Art Unit	
	JACOB MARKS	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08-20-2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *9-15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04-05-2007; 06-29-2009; 08-10-2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 1-15 are pending. Applicant's election without traverse of claims 1-8 in the reply filed on 08-20-2009 is acknowledged. Claims 9-15 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munshi (US Pat. Pub. 2003/0026063) in view of Skotheim et al. (US Pat. No. 6,797,42328.

Regarding claims 1-3, Munshi discloses an electrochemical capacitor comprising: a thin polymer film with electrolyte absorbed therein (polymer electrolyte), an anode and a cathode (abstract). Electrodes of electrochemical capacitors are inherently polarizable. Munshi discloses that the electrolyte may be composed of a lithium salt (par. 34). Munshi further teaches that active materials based on lithium battery active materials have the advantage of allowing prolonged discharge times and increased capacity (par. 79). Munshi discloses the use of transition metal oxides as the active material (79). A capacitor with a transition metal oxide active material and lithium salt electrolyte would inherently be capable of releasing lithium ions through a reversible electrochemical oxidation-reduction reaction. Munshi does not disclose that a lithium-metal alloy, or more specifically a lithium-gold alloy can be used as part of the active material.

However, Skotheim et al. disclose an anode active material for a lithium ion battery comprising lithium and a lithium metal alloy, wherein the lithium may be alloyed with gold (abstract, col. 16 lines 24-45). Therefore, it would have been obvious to one of ordinary skill in the art to use the active material containing a gold-lithium alloy, as taught by Skotheim et al., in the capacitor of Munshi, because Munshi discloses that active materials based on lithium battery active materials have prolonged discharge times and increased capacity.

Regarding claim 4, Munshi discloses that the cathode and the anode should consist of similar materials. Therefore, the combination of Munshi and Skotheim would

inherently have the same gold-lithium anode and cathode as discussed with respect to claim 1.

Regarding claim 5, Munshi discloses that the electrolyte may be composed of a lithium salt (par. 34). Munshi further teaches that active materials based on lithium battery active materials have the advantage of allowing prolonged discharge times and increased capacity (par. 79). Munshi discloses the use of transition metal oxides as the active material (79). A capacitor with a transition metal oxide active material and lithium salt electrolyte would inherently have lithium deposited on the electrode during charging and discharging. The combination of Munshi and Skotheim et al. would inherently have the lithium alloy form on the lithium gold alloy component of the active material.

Regarding claim 6, Munshi discloses that the polymer electrolyte may be Nafion or poly(bis(methoxy-ethoxy-ethoxide))-phos- phazene (MEEP), which are ion exchange resins (par. 33).

Regarding claim 7, Munshi disclose an anode, a cathode and an electrolyte (electrode assembly) (abstract).

Regarding claim 8, Munshi discloses capacitor electrodes with high capacity. The combination of Munshi and Skotheim et al. would inherently have a capacity of $20F/cm^3$.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACOB MARKS whose telephone number is (571)270-

7873. The examiner can normally be reached on Monday through Friday 7:30-5:00 alt Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacob Marks/

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795